

FIG.1

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5'-ATG TGG AAA TGG ATA CTG ACA CAT TGT GCC TCA GCC TTT CCC CAC-
+-----+-----+-----+-----+-----+-----+-----+-----+
Met Trp Lys Trp Ile Leu Thr His Cys Ala Ser Ala Phe Pro His-
-CTG CCC GGC TGC TGC TGC TGC TGC TTT TTG TTG CTG TTC TTG GTG-
+-----+-----+-----+-----+-----+-----+-----+-----+
Leu Pro Gly Cys Cys Cys Cys Phe Leu Leu Phe Leu Val-
-TCT TCC GTC CCT GTC ACC TGC CAA GCC CTT GGT CAG GAC ATG GTG-
+-----+-----+-----+-----+-----+-----+-----+-----+
Ser Ser Val Pro Val Thr Cys Gln Ala Leu Gly Gln Asp Met Val-
-TCA CCA GAG GCC ACC AAC TCT TCT TCC TCC TCC TCC TCC TCT CCT-
+-----+-----+-----+-----+-----+-----+-----+-----+
Ser Pro Glu Ala Thr Asn Ser Ser Ser Ser Ser Ser Phe Ser Ser Pro-
-TCC AGC GCG GGA AGG CAT GTG CGG AGC TAC AAT CAC CTT CAA GGA-
+-----+-----+-----+-----+-----+-----+-----+-----+
Ser Ser Ala Gly Arg His Val Arg Ser Tyr Asn His Leu Gln Gly-
-GAT GTC CGC TGG AGA AAG CTA TTC TCT TTC ACC AAG TAC TTT CTC-
+-----+-----+-----+-----+-----+-----+-----+-----+
Asp Val Arg Trp Arg Lys Leu Phe Ser Phe Thr Lys Tyr Phe Leu-
-AAG ATT GAG AAG AAC GGG AAG GTC AGC GGG ACC AAG AAG GAG AAC-
+-----+-----+-----+-----+-----+-----+-----+-----+
Lys Ile Glu Lys Asn Gly Lys Val Ser Gly Thr Lys Lys Glu Asn-

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FIG.1A

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-TGC CCG TAC AGC ATC CTG GAG ATA ACA TCA GTA GAA ATC GGA GTT-
+-----+-----+-----+-----+-----+-----+
Cys Pro Tyr Ser Ile Leu Glu Ile Thr Ser Val Glu Ile Gly Val-

-GTT GCC GTC AAA GCC ATT AAC AGC AAC TAT TAC TTA GCC ATG AAC-
+-----+-----+-----+-----+-----+-----+
Val Ala Val Lys Ala Ile Asn Ser Asn Tyr Tyr Leu Ala Met Asn-

-AAG AAG GGG AAA CTC TAT GGC TCA AAA GAA TTT AAC AAT GAC TGT-
+-----+-----+-----+-----+-----+-----+
Lys Lys Gly Lys Leu Tyr Gly Ser Lys Glu Phe Asn Asn Asp Cys-

-AAG CTG AAG GAG AGG ATA GAG GAA AAT GGA TAC AAT ACC TAT GCA-
+-----+-----+-----+-----+-----+-----+
Lys Leu Lys Glu Arg Ile Glu Glu Asn Gly Tyr Asn Thr Tyr Ala-

-TCA TTT AAC TGG CAG CAT AAT GGG AGG CAA ATG TAT GTG GCA TTG-
+-----+-----+-----+-----+-----+-----+
Ser Phe Asn Trp Gln His Asn Gly Arg Gln Met Tyr Val Ala Leu-

-AAT GGA AAA GGA GCT CCA AGG AGA GGA CAG AAA ACA CGA AGG AAA-
+-----+-----+-----+-----+-----+-----+
Asn Gly Lys Gly Ala Pro Arg Arg Gly Gln Lys Thr Arg Arg Lys-

-AAC ACC TCT GCT CAC TTT CTT CCA ATG GTG GTA CAC TCA TAG-3'
+-----+-----+-----+-----+-----+-----+
Asn Thr Ser Ala His Phe Leu Pro Met Val Val His Ser *
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FIG.2

5'-- ATGTCCTACAATCACCTGCAGGGAGATGTCGCTGGAGAAAGCTGTTCTCCTCACCAG--
 +-----+-----+-----+-----+-----+-----+-----+-----+
 M S Y N H L Q G D V R W R K L F S F T K
 --TACTTTCTCAAGATTGAAAGAACGGCAAGGTCAGCGGACCAAGAGGAAACTGTCCG--
 +-----+-----+-----+-----+-----+-----+-----+-----+
 Y F L K I E K N G K V S G T K K E N C P--
 --TACAGTATCCTAGAGATAACATCAGTGGAAATCGGAGTTGTTGCCGTCAAAGCCATTAC--
 +-----+-----+-----+-----+-----+-----+-----+-----+
 Y S I L E I T S V E I G V V A V K A I N--
 --AGCAACTATTACTTAGCCATGAACAAGAGGGGAACTCTATGGCTCAAAGAATTTAAC--
 +-----+-----+-----+-----+-----+-----+-----+-----+
 S N Y Y L A M N K K G K L Y G S K E F N--

FIG. 2A

-AATGACTGTAACTGAAAAGAGAGGATAGAGGAAATGGATACAAACCTATGCATCTTTT-
+-----+-----+-----+-----+-----+-----+
N D C K L K E R I E E N G Y N T Y A S F-
-AATGGCAGCACAAACGGCAGGCAATGTATGTGGCATTTGAATGGAAAAGGAGCTCCCAGG-
+-----+-----+-----+-----+-----+-----+
N W Q H N G R Q M Y V A L N G K G A P R-
-AGAGGACAAAAACAAGAGGAAAAACACCTCCGCTCACTTCCTCCCCATGGTGGTCCAC-
+-----+-----+-----+-----+-----+-----+
R G Q K T R R K N T S A H F L P M V V H -
-TCATAA -3'
+-----+-----+-----+-----+-----+-----+
S *

FIG.3

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5'- ATGTCCTTCCTCCTGCAGGTAGGCATGTGCGGAGCTACAATCACCTCCAGGGAGAT-
+-----+-----+-----+-----+-----+-----+
M S S P S S A G R H V R S Y N H L Q G D-
-

-GTCCGCTGGAGAAAGCTGTTCTCCTTCACCAAGTACTTCTCAAGATTGAAAAGAACGGC-
+-----+-----+-----+-----+-----+-----+
V R W R K L F S F T K Y F L K I E K N G-
-

-AAGGTCAGCGGACCAAGAGGAAAACGTGCCGTACAGTATCCTAGAGATAACATCAGTG-
+-----+-----+-----+-----+-----+-----+
K V S G T K K E N C P Y S I L E I T S V-
-

-GAAATCGGAGTGTGCGGTCAAAGCCATTAAACAGCAACTATTACTTAGCCATGAACAAG-
+-----+-----+-----+-----+-----+-----+
E I G V V A V K A I N S N Y Y L A M N K-

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FIG. 3A

--AAGGGAAACTCTATGGCTCAAAGAATTAAACAATGACTGTAACTGAAAGAGAGGATA--
+-----+-----+-----+-----+-----+-----+
K G K L Y G S K E F N N D C K L K E R I--
--GAGGAAATGGATACAAACCTATGCATCTTTAACTGGCAGCACAAACGGCAGGCAAAATG--
+-----+-----+-----+-----+-----+-----+
E E N G Y N T Y A S F N W Q H N G R Q M--
--TATGTGCATTGAATGGAAAAGGAGCTCCCAGGAGAGGACAAAAACAAGAAGGAAAAAAC--
+-----+-----+-----+-----+-----+-----+
Y V A L N G K G A P R R G Q K T R R K N--
--ACCTCCGCTCACTTCCTCCCATGGTGGTCCACTCATAA -3'
+-----+-----+-----+-----+-----+-----+
T S A H F L P M V V H S *

FIG.4

5'- ATGCTGGTCAGGACATGGTTTCTCCGGAGGCTACCAACTCTAGCTCCAGCAGCTTCTCC-
+-----+-----+-----+-----+-----+-----+
M L G Q D M V S P E A T N S S S S S F S-
-TCTCCTAGCTCTGCAGGTAGGCATGTCCGGAGCTACAATCACCTCCAGGGAGATGTCCGC-
+-----+-----+-----+-----+-----+-----+
S P S S A G R H V R S Y N H L Q G D V R -
-TGGAGAAAGCTGTTCTCCTTCACCAAGTACTTCTCAAGATTGAAAAGAACGGCAAGGTC-
+-----+-----+-----+-----+-----+-----+
W R K L F S F T K Y F L K I E K N G K V-
-AGCGGACCAAGGAAACTGTCCGTACAGTATCCTTAGAGATAACATCAGTGGAATC-
+-----+-----+-----+-----+-----+-----+
S G T K K E N C P Y S I L E I T S V E I -
-GGAGTTGTTGCCGTCAAGCCATTACAGCAACTATTACTTAGCCATGAACAAGAGGGG-
+-----+-----+-----+-----+-----+-----+
G V V A V K A I N S N Y Y L A M N K K G-

FIG. 4A

-AAACTCTATGGCTCAAAGAATTAAACAATGACTGTAACTGAAAGAGAGGATAGAGGAA-
+-----+-----+-----+-----+-----+-----+
K L Y G S K E F N N D C K L K E R I E E -
-AATGGATACAACCTATGCATCTTTTAACTGGCAGCACAAACGGCAGGCAAAATGTATGTG-
+-----+-----+-----+-----+-----+-----+
N G Y N T Y A S F N W Q H N G R Q M Y V-
-GCATTGAATGGAAAAGGAGCTCCCAGGCAGGGACAAAACAAAGAGGAAAACACCTCC-
+-----+-----+-----+-----+-----+-----+
A L N G K G A P R Q G Q K T R R K N T S-
-GCTCACTTCCCTCCCATGGTGTCCCACTCATAA -3'
+-----+-----+-----+-----+-----+-----+
A H F L P M V V H S *